



Washington State Department of Printing

2003 Sustainability Plan



Policy Statement

Sustainability can be defined simply as the application of the Golden Rule from generation to generation. Sustainable organizations use, develop, and protect resources in a way that meets current needs without sacrificing the requirements of future generations. As the demands on our natural resources increase, agencies must implement sustainable practices to safeguard the environmental health, economic growth, and quality of life of Washington's citizens today and in the future.

The Department of Printing (PRT) has long been a leader in environmentally responsible printing, with a strong tradition of recycling, pollution prevention and socially responsible purchasing. The agency is dedicated to the continued use of sustainable practices to protect the health and safety of customers, employees and the surrounding community, to ensure excellent product quality, and to provide new opportunities for economic success.

As part of the agency's continuing efforts to ensure that both natural resources and manufacturing by-products are managed responsibly, the Department of Printing is firmly committed to actively supporting the policies and requirements issued by Governor Gary Locke in Executive Order 02-03 - Sustainable Practices by State Agencies.

Agency background

The Department of Printing provides complete printing and mailing services to state agencies, political subdivisions and institutions of higher education. The agency produces over 100,000 jobs each year, affecting virtually every household in the state of Washington.

The Department of Printing's main facility is located in Tumwater, and houses the administrative offices, graphic design, prepress, printing, binding, mailing and fulfillment areas as well as a large copy center. In addition, the agency operates copy centers throughout Lacey, Olympia, and Tumwater.

Purpose

The Department of Printing Sustainability Plan was developed to:

- Meet the requirements of Executive Order 02-03.
- Provide a foundation for future efforts by documenting current and past actions taken by the Department of Printing in support of environmentally and socially responsible production practices.
- Set long-term and short-term goals for implementing new practices at PRT that will help reverse current natural system declines that threaten the economic health and social vitality of Washington State.
- Establish a system for measuring and reporting the results of sustainability efforts at the Department of Printing.
- Create a plan for raising employee awareness of the importance of each person's actions in implementing sustainable practices in the workplace.
- Help PRT customers implement and document sustainability goals related to printing and mailing activity in their organizations.





Current practices and accomplishments

The Department of Printing's commitment to sustainability extends to every facet of agency operations. As of June 2003, PRT had taken the following steps in support of environmentally responsible printing.

Design and Prepress

<i>Current practice</i>	<i>Benefits</i>
Electronic proofs are used whenever possible.	<ul style="list-style-type: none">• Reduces quantity of paper, toner, and finishing supplies used.
"SilverKleen" silver recovery system is used in the film processing area.	<ul style="list-style-type: none">• Reclaims 99%-pure silver from processing solution.• Removes hazardous chemicals from wastewater.
Unless otherwise requested by the customer, hard-copy proofs are produced on plan paper with an Iris printer instead of as photographic bluelines from film.	<ul style="list-style-type: none">• Nearly eliminates the use of film, processing solution, and bluline paper in producing proofs.• Reduces waste by making customer-requested changes to computer files instead of creating new film negatives.
Color proofs are created with a DuPont WaterProof system using water-based solutions.	<ul style="list-style-type: none">• Water-based, non-toxic processing solution creates no hazardous waste.
Design Services shares a printer with Copy Center 2 and shares a PC workstation with Information Technology staff.	<ul style="list-style-type: none">• Saves energy and improves worker health and safety by reducing the number of office machines used.
One designer (half of graphic design staff) tele-commutes four days a week.	<ul style="list-style-type: none">• Reduces fuel consumption and pollution by reducing the number of cars on the road.• Saves energy by reducing the number of office machines used.

Printing and Copying

<i>Current practice</i>	<i>Benefits</i>
All ink is vegetable based (14 percent soy, 8 percent other vegetable oils).	<ul style="list-style-type: none">• Non-toxic ink reduces air emissions.• Ink qualifies as a renewable resource.

All press fountain solutions are alcohol-free.	<ul style="list-style-type: none"> • Solutions evaporate more slowly, reducing air emissions and the amount of ink used. • Extends the life of printing plates, reducing the number of plates needed for large-quantity runs. • Solutions are non-flammable. • Solutions are non-toxic and contain no phosphates.
Water-based processing solution is used for creating printing plates.	<ul style="list-style-type: none"> • Eliminates the use of harmful solvents in the developing process.
“Ink-readi” spray is used on all presses to prevent a skin from forming on the ink.	<ul style="list-style-type: none"> • Eliminates the need to wash presses during printing, saving ink and reducing the amount of press wash solution used.
Manual plate-making process replaced with automated equipment.	<ul style="list-style-type: none"> • Uses less plate-processing solution. • Reduces waste due to spoilage.
Web press uses UV inks.	<ul style="list-style-type: none"> • Ultraviolet light dries ink instantly, reducing air emissions and ink waste.
Automated washing systems are used on two presses.	<ul style="list-style-type: none"> • Reduces the amount of press wash solution used in cleaning, and results in less overall press waste.
All waste paper, used printing plates, and spent toner cartridges are recycled.	<ul style="list-style-type: none"> • Conserves energy and natural resources by recovering aluminum, paper, metal and paper fibers for re-use in other products. • Reduces solid and hazardous waste.
Press room uses a consignment-based ink inventory system.	<ul style="list-style-type: none"> • Reduces quantity of ink ordered and stored on site. • Reduces ink waste due to unused inventory.
Unless otherwise requested by the customer, all jobs are printed on recycled paper with at least 30 percent post-consumer fiber in uncoated paper and at least 10 percent recycled fiber in coated paper.	<ul style="list-style-type: none"> • Preserves natural resources by re-using paper fibers. • Saves energy and generates less pollution in the paper-making process.
Exhaust from all production copying equipment is properly vented.	<ul style="list-style-type: none"> • Improves worker health and safety.





Binding and finishing

<i>Current practice</i>	<i>Benefits</i>
Bindery equipment is regularly maintained and cleaned with biodegradable cleaning solution.	<ul style="list-style-type: none"> • Improves the safety and efficiency of bindery equipment. • Reduces the amount of solvents and hazardous waste.
All stock, uncoated white sheet paper is Process Chlorine Free with at least 30 percent post-consumer recycled fiber content, purchased from Grays Harbor Paper in Hoquiam, Washington.	<ul style="list-style-type: none"> • Supports the local economy. • Makes efficient use of regional resources by purchasing locally-generated recycled paper fibers. • Saves energy because paper mill uses wood waste fuel to generate all steam used in production and half of their other electrical needs.
All wastepaper and used cardboard is sold to Weyerhaeuser for recycling.	<ul style="list-style-type: none"> • Reduces paper waste by sending over 29 tons of paper to be recycled each month. • Preserves natural resources and reduces energy use in manufacturing. • Supports the local economy.
Blank paper trimmed off jobs during finishing is cut to letter size and used for office printing and copying.	<ul style="list-style-type: none"> • Eliminates the need to purchase paper for administrative use in the bindery. • Reduces the amount of paper waste produced by the main plant.
Bindery equipment is turned off when not in use.	<ul style="list-style-type: none"> • Conserves energy. • Increases worker safety and reduces noise and heat in the production area.

Mailing and shipping

<i>Current practice</i>	<i>Benefits</i>
Water-based, non-toxic ink used when printing with videojet mail addressing equipment.	<ul style="list-style-type: none"> • Reduces air emissions and hazardous waste produced by cleaning solvents. • Improves worker safety and health.
All packing peanuts received by the main plant in supply shipments are re-used for outgoing deliveries.	<ul style="list-style-type: none"> • Eliminates disposal of Styrofoam peanuts in landfills • Reduces the need to purchase packing materials.

Customer Service and Education

<i>Current practice</i>	<i>Benefits</i>
Electronic versions of order forms are posted on the Internet to encourage electronic ordering by e-mail.	<ul style="list-style-type: none"> • Reduces paper use by our customers. • Reduces pollution and energy use caused by transporting hard-copy orders by motor vehicle.
Customers are encouraged to use recycled paper whenever possible.	<ul style="list-style-type: none"> • Saves natural resources and energy, and reduces the amount of hazardous waste, by re-using paper fibers. • Diverts paper waste from landfills.
Customer education material, including the agency newsletter, Guide to Services, and all user manuals are posted on the Internet.	<ul style="list-style-type: none"> • Reduces use of paper, toner, ink, and other printing supplies by printing fewer copies of documents.
The estimate request form is only available online.	<ul style="list-style-type: none"> • Reduces paper use by eliminating the hard-copy request form.
Customers are encouraged to take advantage of print on demand and fulfillment services, printing only as needed and using PRT facilities and employees when storing and distributing document.	<ul style="list-style-type: none"> • Reduces the number of warehouses needed for document storage, as well as the energy and supplies used to operate the building and support warehouse employees. • Reduces the amount of ink, paper, and other supplies used in printing.
Internet applications allow customers to create, proof, and order stationery online.	<ul style="list-style-type: none"> • Requires only one open requisition instead of an order form for every job. • Eliminates the use of typesetting and proofing supplies, printing plates, ink, and press solutions for the production of digital print orders.

Administration and support

<i>Current practice</i>	<i>Benefits</i>
Paper with at least 30 percent post-consumer fiber is used in all office printers and copiers.	<ul style="list-style-type: none"> • Saves natural resources and energy.





Use EPA Pollution Prevention Finance software to calculate financial benefits of monitoring, training, and oversight of pollution prevention measures.	<ul style="list-style-type: none"> • Allows the agency to track the cost benefits of sustainable practices.
Computers use energy-saving settings and are turned off at night.	<ul style="list-style-type: none"> • Reduces energy use.
Office supplies are purchased only as needed.	<ul style="list-style-type: none"> • Eliminates waste of unused supplies in storage.
Lighting in office areas is turned off at night.	<ul style="list-style-type: none"> • Reduces energy use.
Employee Services information is distributed by e-mail instead of as printed payroll stuffers.	<ul style="list-style-type: none"> • Reduces the use of paper and ink, and saves energy by eliminating the need to print hard-copy inserts. • Eliminates the need to dispose of used or outdated informational material.
All policies and procedures are posted online on the agency intranet.	<ul style="list-style-type: none"> • Reduces the use of paper and toner, and saves energy by eliminating the need to print copies for all employees.

Overall

<i>Current practice</i>	<i>Benefits</i>
All production areas use re-usable, cloth shop towels instead of disposable paper towels.	<ul style="list-style-type: none"> • Reduces solid waste sent to landfills. • Eliminates the creation of hazardous waste from disposable towels containing shop fluids.
Paper, cardboard, and aluminum cans used by employees are recycled.	<ul style="list-style-type: none"> • Saves natural resources and energy. • Reduces the amount of solid waste produced.
Waste management issues are included in each monthly safety meeting.	<ul style="list-style-type: none"> • Involves employees in planning and implementing sustainable practices.
Hazardous waste resulting from printing processes has been reduced by 55 percent from 2001 to 2002.	

Baseline Data

Please see Appendix A for information on baseline measurements as of August 2003.

Goals and objectives

The Department of Printing believes the sustainability goals of Executive Order 02-03 are important to the continued health and vitality of Washington state. In support of these goals, the agency has set the following objectives for improving sustainable practices in every area of operation.

GOAL: Institutionalize sustainability as an agency value.

Objectives:

- Include sustainability goals in all agency and division strategic plans by July 2004.
- Establish a Sustainable Practices Team composed of employees from every department. The team will meet at least quarterly, starting second quarter 2004 to discuss opportunities, assess agency progress in achieving sustainability plan goals, and make recommendations for future action.
- Create a process to collect employee suggestions for improving sustainable practices throughout the agency by January 2004.

Expected Outcomes

- The Department of Printing incorporates sustainability principles in all agency operations, acting as a leader in environmentally responsible practices among both public and private printers.

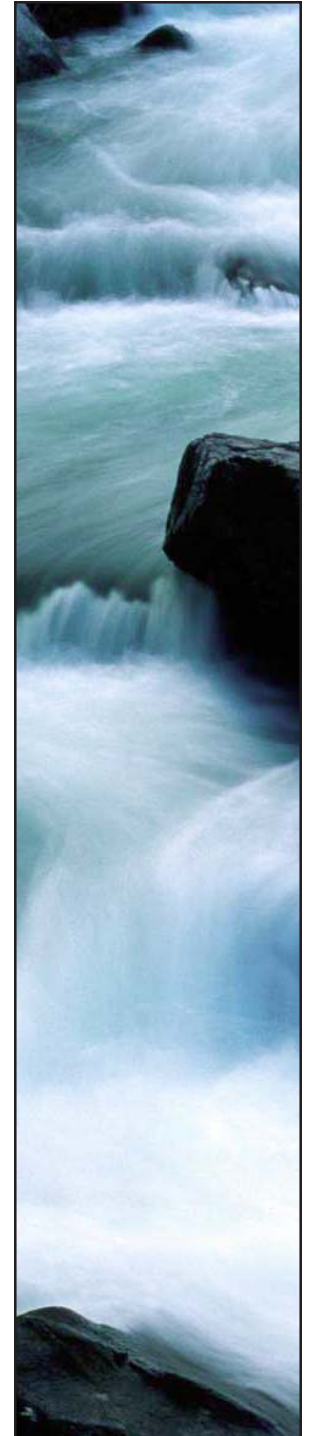
GOAL: Raise employee awareness of sustainable practices in the workplace.

Objectives:

- Include sustainable practices in employee orientation materials offered online through the agency intranet by January 2005.
- Post quarterly and annual updates on progress toward achieving sustainability and pollution prevention goals on bulletin boards and the agency intranet starting January 2005.
- Continue to include waste management and sustainable practices issues in monthly employee safety meetings.
- Provide online sustainability training opportunities and links on the agency intranet by January 2005.
- Recommend that all individual employee training plans include classes about sustainability.

Expected Outcomes

- Every Department of Printing employee understands and supports the agency's sustainability policy and actively participates in implementing plan objectives.





GOAL: Minimize use of materials, energy, and water.

Objectives:

- Establish baseline energy and water usage levels at fiscal year 2002.
- Switch to computer-to-plate printing by 2005 to reduce the use of film and processing solutions.
- Work with General Administration to repair water leaks and install energy-efficient lighting wherever possible.
- Establish a written “turn it off” policy to reduce energy drains from unused office machines, production equipment and small appliances.
- Reduce energy demands by purchasing Energy Star certified computers, small appliances and office equipment.

Expected Outcomes

- Reduce energy use by 5% by fiscal year 2007.
- Reduce amount of film and processing solution used by 10% by 2005.
- Reduce water use by 5% by fiscal year 2007.

GOAL: Minimize pollution by shifting to clean energy and reducing hazardous waste.

Objectives:

- Encourage car-pooling, use of mass transit, and other commute reduction strategies to reduce the amount of energy used by employees in traveling to and from work.
- Initiate a vehicle maintenance program by January 2004 to reduce oil leaks and other sources of pollution and ensure all agency-owned vehicles perform with highest fuel efficiency possible.
- Implement a regular inspection and maintenance process to ensure all ventilation systems are operating effectively by January 2004.
- Replace at least half of gasoline-powered delivery vehicles with hybrid or alternative-fuel vehicles by 2015.

Expected Outcomes

- Reduce the use of fossil fuels for commuters and delivery vehicles.
- Reduce pollution caused by vehicle exhaust and fluid leaks.

GOAL: Shift to non-toxic, recycled and remanufactured materials in purchasing and production.

Objectives:

- Continue to use only processed chlorine-free paper with the highest total and post-consumer recycled content possible for all in-house stock and office paper.
- Continue to purchase only remanufactured toner cartridges for all copiers and printers, and recycle all used toner cartridges.
- Ensure all new and replacement office furniture is constructed of non-toxic, renewable materials, using refinished or surplus furniture whenever possible.
- Shift purchasing of office supplies to use items that are recyclable and are made from recycled materials.

Expected Outcomes

- Expanded use of recycled and remanufactured process in both production and administration.

GOAL: Expand markets for environmentally preferable products and services.

Objectives:

- Seek out vendors who use sustainable processes and production materials when bidding jobs to private printers and binderies.
- Purchase 10% of energy from clean, renewable resources by June 2010.
- Amend custodial service contracts to require the use of organic, non-phosphate cleaning agents.
- Purchase supplies and equipment that support sustainable goals.

Expected Outcomes

- Expanded availability and lower prices for environmentally responsible materials as demand increases.

GOAL: Reduce or eliminate waste as an inefficient or improper use of resources.

Objectives:

- Establish a system for monitoring and tracking waste produced in all production areas to find opportunities for further reduction.
- Print two-sided documents whenever possible.
- Increase employee recycling of glass, aluminum and cardboard.
- Recycle all fluorescent lights.

Expected Outcomes

- Hazardous waste reduced by 10% by 2010.

Communication

In order for sustainability efforts at the Department of Printing to be successful, all employees must understand what sustainability is, why it benefits everyone, and how important each of their actions is. Customers must also know how sustainable printing practices benefit them. This is why effective communication and education is so important to successfully implementing sustainability goals.

The Department of Printing will take the following steps to provide employees and customers with effective, ongoing communication about sustainable practices:

- Expand and update information about PRT's environmentally responsible production processes and sustainability initiatives posted on the agency Web site.
- Include regular articles about sustainable printing practices in agency newsletters directed at employees and external customers.





- Posting updated pollution prevention and sustainability results on the agency intranet and bulletin boards.
- Encouraging Supervisors and Managers to include sustainability information in weekly staff meetings.
- Adding online sustainability training, information, and links to the training section of the agency intranet.

Roles and responsibilities

Implementation

The Supervisor or Manager of each department with the Department of Printing will be responsible for implementing all sustainability plan goals related to their section, assigning responsibilities for communicating expectations and results to employees, collecting data, and reporting results. Assistant Directors will oversee agency-wide implementation to ensure objectives are achieved and results are measured promptly.

Data collection and reporting

During the first year of plan implementation, baseline measurements will be established for current energy and water usage, hazardous and solid waste production, and recycling volumes. Each department will be responsible for measuring data related to their section, and the Quality Coordinator will collect agency-wide data. As plan goals are implemented, Managers and Supervisors will gather collected data and submit the information to the Quality Coordinator for reporting.

Progress reports

The Department of Printing will submit the initial Sustainability Plan by September 15, 2003. New suggestions made by employees and additional sustainable practices or equipment will be recorded and added to updated plans to be submitted in September of each even-numbered year.

Beginning in October 2004, the Department of Printing will submit an annual progress report to the Office of Financial Management detailing the agency's progress in meeting the goals established in the Sustainability Plan.

Contact information

Questions, comments and requests for information about the Department of Printing Sustainability Plan should be directed to the following:

Sustainability Coordinator

Washington State Department of Printing
PO Box 798, Olympia WA 98507-0798

Mail Stop: 47100

Telephone: 360-570-5555

Appendices





Appendix A: Baseline data

Number of employees:

135 full-time employees

Size and location of agency buildings:

<i>Name</i>	<i>Location</i>	<i>Area (In Square Feet)</i>
Main Plant	7580 New Market St. SW Tumwater	70,000
Copy Center 1	General Administration Building 11th Avenue, Olympia	1,345
Copy Center 6	Ecology Building Desmond Drive, Lacey	2,714
Copy Center 9	OSPI Building 7th and Franklin, Olympia	525
Copy Center 10	DSHS Building Woodland Square Loop, Lacey	576
Copy Center 11	Labor and Industries Building Linderson Way, Tumwater	1,100
Copy Center 12	DNR Building 11th and Washington, Olympia	2,038
Copy Center 13	CTED Building 9th and Columbia, Olympia	433
Copy Center 15	DOH Building Point Plaza East, Tumwater	469
Total area	Main Plant and 9 copy centers	79,200

Paper use

Many different weights and sizes of paper are used in printing, including cut sheets in sizes from 8½" x 11" to 26" x 40", and roll stock measured by weight. Because production paper uses so many different units of measure, it is almost impossible to give a truly accurate accounting of the total amount of paper used for all PRT printing projects. Therefore, the following data includes only standard business paper used in office copiers, printers, and fax machines between July 2002 and June 2003.

<i>Paper</i>	<i>Recycled content</i>	<i>Quantity</i>	<i>8½" x 11 Equivalent</i>
20# Grays Harbor Bond, 8½" x 11"	30% post consumer	625,500	625,500
20# Grays Harbor Bond, 8½" x 14"	30% post consumer	15,000	15,000
20# Grays Harbor Bond, 11" x 17"	30% post consumer	20,000	40,000
60# Domtar Valorem Text, 8½" x 11"	30% post consumer	23,000	23,000
60# Domtar Valorem Text, 11" x 17"	30% post consumer	2,500	5,000
Total 8½" x 11" sheets			708,500

Vehicle use

The Department of Printing owns and operates eight vehicles for pickup and delivery of jobs. The following is a list of agency vehicles and the type of fuel used for each.

- 1989 Chevy Cube, Diesel
- 1995 Ford Cube Truck, Diesel
- 2001 Grumman Workhorse, Gasoline
- 1992 Ford Aerostar, Gasoline
- 1995 GMC Step, Gasoline
- 1997 Ford Van, Gasoline
- 2001 Chevy Express Van, Gasoline
- 1992 Chevy Van, Gasoline

Because the agency began tracking mileage for these vehicles in June 2003, no figures are currently available for the miles driven for a full year. During the 30 working days in which we have gathered data, our drivers traveled a total of 5474 miles and averaged 182.5 miles per day. Using this number as a base and assuming an average of 22

working days per month, we estimate that vehicles owned by PRT will travel approximately 48,000 miles in the next fiscal year. The following table shows estimated miles traveled on agency business for both agency-owned and employee-owned vehicles:

<i>Type of Vehicle</i>	<i>Miles per year (estimated)</i>
Agency trucks and vans	48,000
Personal vehicles	20,900
Total	68,900



Appendix B: Executive Order 02-03

Executive Order 02-03: Sustainable Practices by State Agencies

WHEREAS, the state of Washington is committed to the mutually compatible goals of economic vitality, a healthy environment and strong communities; and

WHEREAS, sustainability provides for current needs without sacrificing the needs of future generations; and

WHEREAS, within state government, sustainable practices require decisions based on a systematic evaluation of the long-term impacts of an activity or product on health and safety, communities, and the environment and economy of Washington State; and

WHEREAS, reversing the steady decline in the natural resources and ecosystems on which people and economic vitality depend is critical to our future; and

WHEREAS, the regional and global implications of climate change, loss of biological diversity, and threats to resources such as clean water require us all to examine and change behaviors; and

WHEREAS, state government should model sustainable business practices that contribute to the long-term protection and enhancement of our environment, our economy and the health of current and future generations;

NOW THEREFORE, I, Gary Locke, Governor of the state of Washington, declare my commitment that state government operations be conducted in a manner consistent with these principles of sustainability and contribute positively towards the quality of life of all citizens.

It is THEREFORE ordered and directed that:

1. Each state agency shall establish sustainability objectives and prepare a biennial Sustainability Plan to modify its practices regarding resource consumption; vehicle use; purchase of goods and services; and facility construction, operation and maintenance.

Plans should be guided by the following long-term goals:

- Institutionalize sustainability as an agency value;
- Raise employee awareness of sustainable practices in the workplace;
- Minimize energy and water use;
- Shift to clean energy for both facilities and vehicles;
- Shift to non-toxic, recycled and remanufactured materials in purchasing and construction;
- Expand markets for environmentally preferable products and services; and
- Reduce or eliminate waste as an inefficient or improper use of resources.

Initial plans may be modeled on the outline accompanying this executive order and shall include descriptions of currently used sustainable practices. Each agency shall complete its initial plan by September 1, 2003. Subsequent plans shall be completed by September 1 each even-numbered year thereafter.

Each state agency shall report annually on its progress in implementing its Sustainability Plan. The first progress report shall be submitted to the Office of Financial Management by October 15, 2004. Subsequent progress reports shall be submitted each October 15.

2. The Office of Financial Management shall designate a Sustainability Coordinator to assist state agencies in meeting the goals of this executive order. The Coordinator shall:

- Assist agencies in developing their Sustainability Plans;
- Assist agencies in educating their employees on sustainable business practices;
- Chair an inter-agency work group to promote information-sharing and cooperation;
- Create and maintain a Sustainable Washington Internet Website where agency plans and accomplishments can be viewed by state agencies and the public;
- Develop incentives to recognize innovative agency practices that foster sustainability;
- Work to eliminate barriers to sustainable practices; and
- Identify opportunities for coordinated sustainable activities by state agencies such as the purchase of sustainable products through state contracts.

3. The Sustainability Coordinator, in consultation with state agencies, shall establish Sustainability Advisory Council consisting of representatives from the private sector and others with sustainability expertise to advise state agencies on how to make state government operations more sustainable.

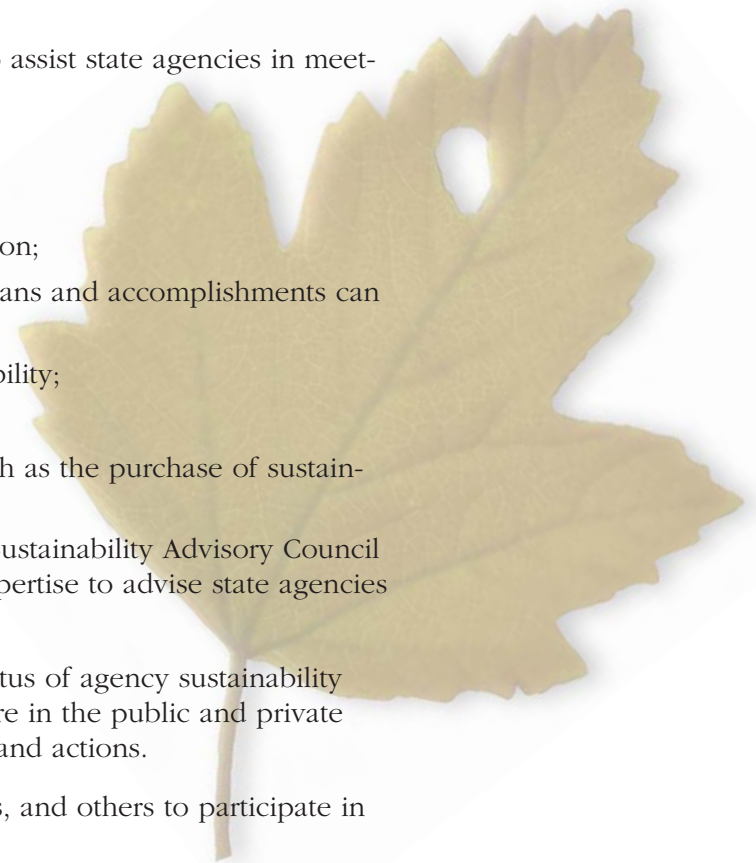
The Sustainability Advisory Council shall report to me by February 1, 2004 on the status of agency sustainability activities, opportunities for improvements based on effective strategies used elsewhere in the public and private sectors, and the best means to integrate sustainability into state government policies and actions.

I invite institutions of higher education, public schools, elected officials, commissions, and others to participate in implementing this executive order within their organizations.

This executive order shall take effect immediately.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the State of Washington to be Affixed at Olympia this 18th day of September A.D., Two Thousand Two.

GARY LOCKE
Governor of Washington





WASHINGTON STATE DEPARTMENT OF PRINTING

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